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(71) Applicant and

(72) Inventor: REIDY, James, J. [US/US]; 1260 Main Street,  
Holden, MA 01520-1020 (US).

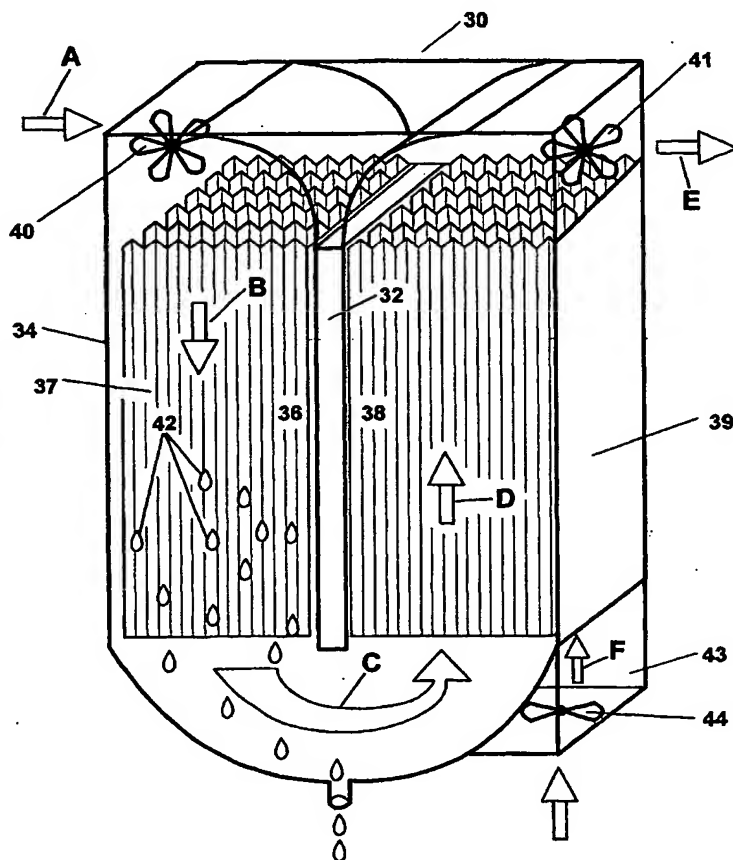
(74) Agent: DINGMAN, Brian, M.; Mirick, O'Connell, De-  
Mallie & Lougee, LLP, 1700 West Park Drive, Westbor-  
ough, MA 01581-3941 (US).

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[Continued on next page]

(54) Title: THERMOELECTRIC, HIGH-EFFICIENCY, WATER GENERATING DEVICE



(57) Abstract: A water generating device utilizing thermoelectric cooling, also known as Peltier technology, for obtaining potable water from ambient air inside or outside a structure or dwelling, having a unique continuous duct for bringing this supply of ambient air to the device and for releasing the air back outside the device after it has been processed. This device includes a cold sink with which the incoming air is cooled below the dew point to condense the existing water vapor. The cooled air is then redirected over the heat sink which increases the efficiency and cooling capability of the device over that of using only the warmer ambient air to cool the heat sink. The rate of air flow is controlled by the variable speed of one or more fans or blowers. The fan or blower speed in turn is controlled by a device that determines the current ambient dew point by measuring the temperature and relative humidity, and the temperature of the cold sink. The incoming air flow is increased or decreased by the fan or blower, to the maximum possible flow rate without excessively exceeding the determined dew point temperature of the incoming air being processed.



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